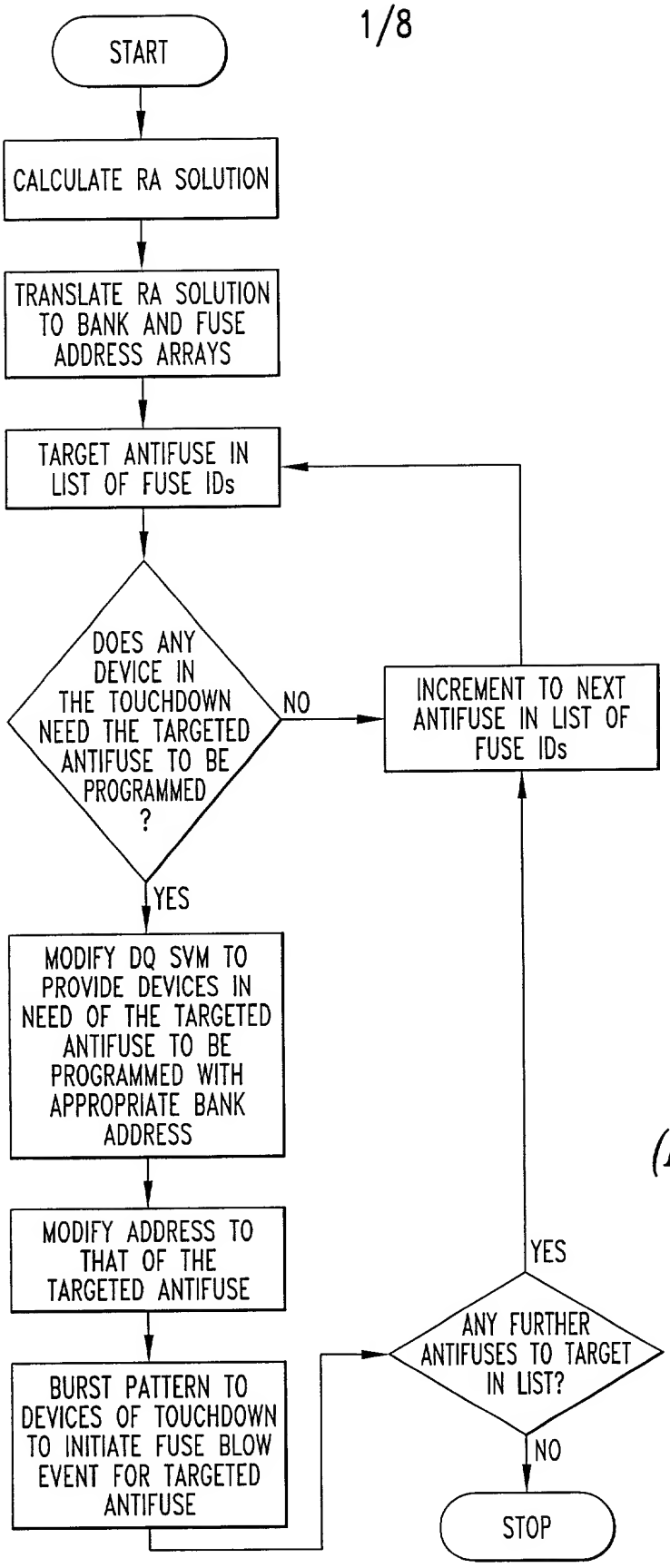


Fig. 1
(Prior Art)

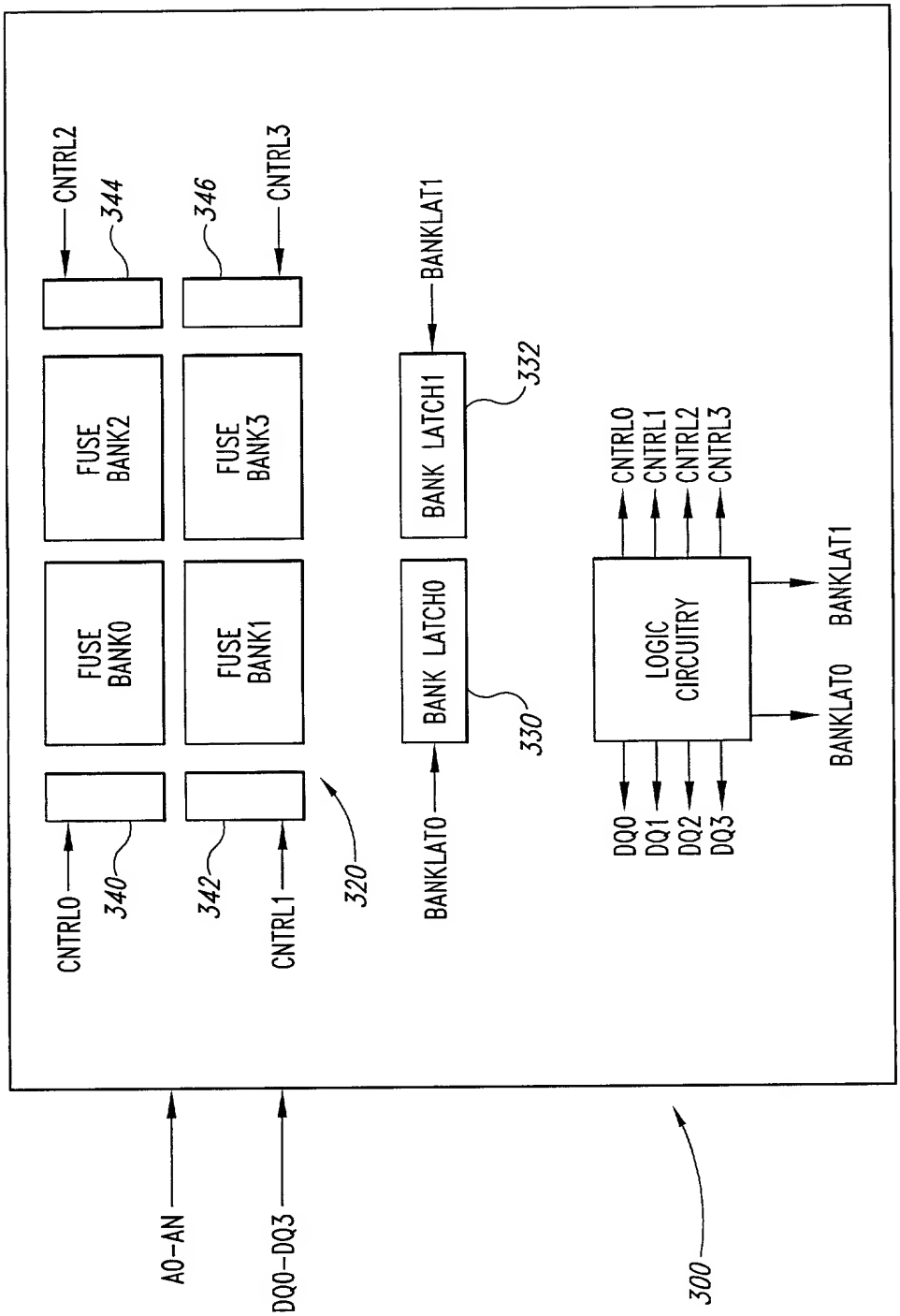

A0-AN
DQ0-DQ3
300
320
CNTRL0
340
342
CNTRL1
FUSE BANK0
FUSE BANK1
FUSE BANK2
FUSE BANK3
344
CNTRL2
346
CNTRL3
BANKLAT0
BANK LATCH0
330
BANKLAT1
BANK LATCH1
332
LOGIC CIRCUITRY
DQ0
DQ1
DQ2
DQ3
CNTRL0
CNTRL1
CNTRL2
CNTRL3
BANKLAT0
BANKLAT1

Fig. 2

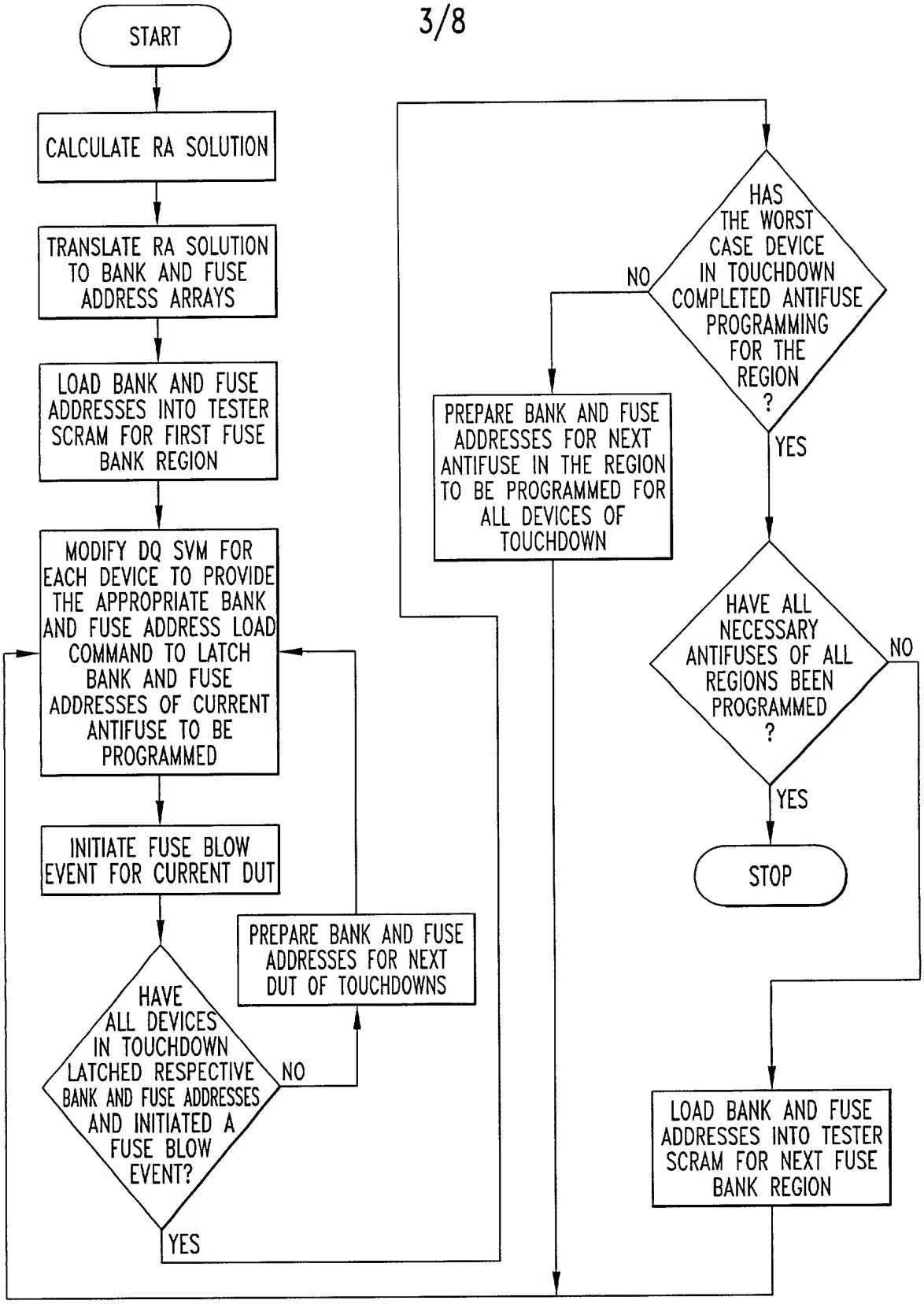

START
CALCULATE RA SOLUTION
TRANSLATE RA SOLUTION TO BANK AND FUSE ADDRESS ARRAYS
LOAD BANK AND FUSE ADDRESSES INTO TESTER SCRAM FOR FIRST FUSE BANK REGION
MODIFY DQ SVM FOR EACH DEVICE TO PROVIDE THE APPROPRIATE BANK AND FUSE ADDRESS LOAD COMMAND TO LATCH BANK AND FUSE ADDRESSES OF CURRENT ANTIFUSE TO BE PROGRAMMED
INITIATE FUSE BLOW EVENT FOR CURRENT DUT
PREPARE BANK AND FUSE ADDRESSES FOR NEXT DUT OF TOUCHDOWNS
HAVE ALL DEVICES IN TOUCHDOWN LATCHED RESPECTIVE BANK AND FUSE ADDRESSES AND INITIATED A FUSE BLOW EVENT?
NO
YES
HAS THE WORST CASE DEVICE IN TOUCHDOWN COMPLETED ANTIFUSE PROGRAMMING FOR THE REGION ?
NO
YES
PREPARE BANK AND FUSE ADDRESSES FOR NEXT ANTIFUSE IN THE REGION TO BE PROGRAMMED FOR ALL DEVICES OF TOUCHDOWN
HAVE ALL NECESSARY ANTIFUSES OF ALL REGIONS BEEN PROGRAMMED ?
NO
YES
STOP
LOAD BANK AND FUSE ADDRESSES INTO TESTER SCRAM FOR NEXT FUSE BANK REGION

Fig. 3

SIMPLIFIED WAVEFORM FOR J994 FUSE BLOW METHOD

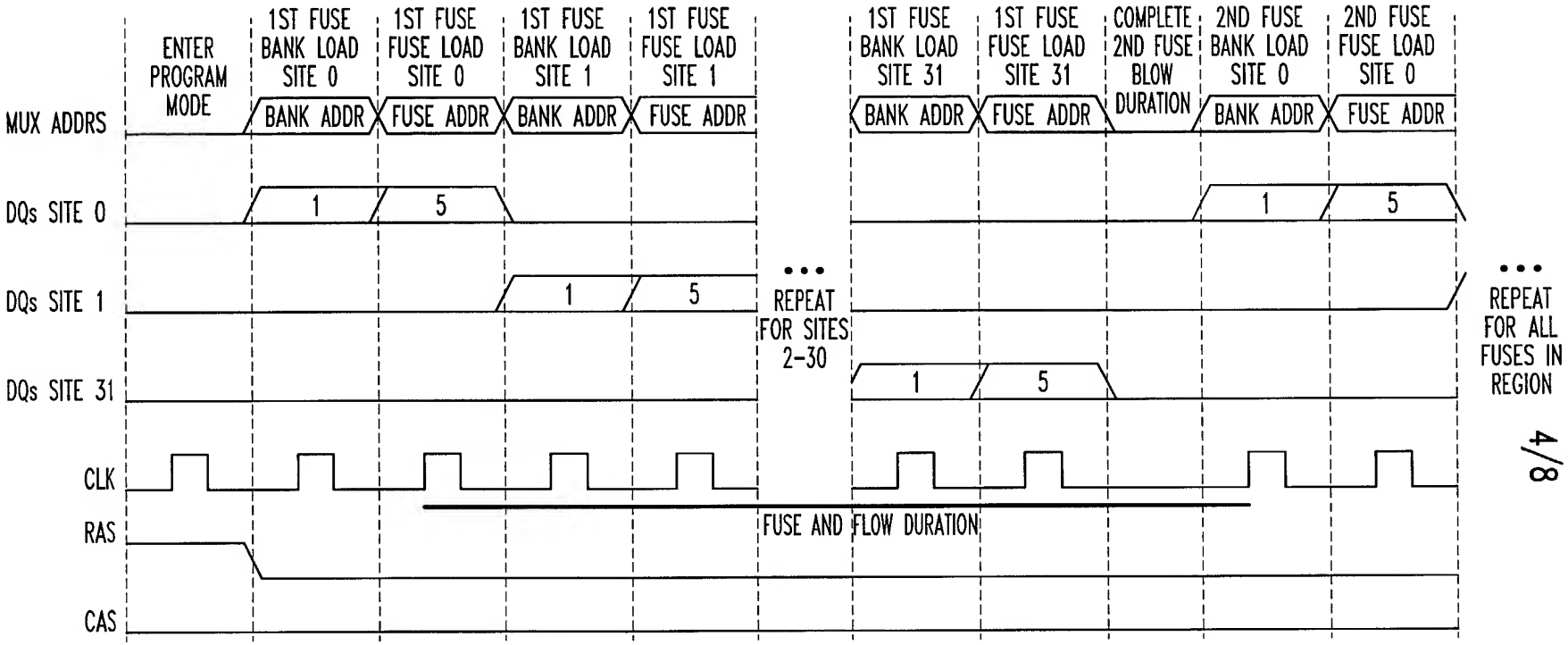


Fig. 4

DQs FOR BANK AND FUSE ADDRESS LOADING

3210	HEX	FUNCTION
0000	0	LOAD NOTHING
0001	1	LOAD BANK ADDRESS LEFT
0010	2	LOAD BANK ADDRESS RIGHT
0101	5	LOAD FUSE ADDRESS TOP LEFT
0110	6	LOAD FUSE ADDRESS TOP RIGHT
1001	9	LOAD FUSE ADDRESS BOTTOM LEFT
1010	A	LOAD FUSE ADDRESS BOTTOM RIGHT

SCRAM RAM			DQ SVM DATA DUT 0 0123	DUT 1 0123	. . .	DUT 31 0123	. . .	DUT 63 0123
BANK	ADDR	DUT 0	1000	0000	. . .	0000	. . .	0000
FUSE	ADDR	DUT 0	1010	0000	. . .	0000	. . .	0000
BANK	ADDR	DUT 1	0000	1000	. . .	0000	. . .	0000
FUSE	ADDR	DUT 1	0000	1010	. . .	0000	. . .	0000
.								
.								
.								
BANK	ADDR	DUT 31	0000	0000	. . .	1000	. . .	0000
FUSE	ADDR	DUT 31	0000	0000	. . .	1010	. . .	0000
.								
.								
.								
BANK	ADDR	DUT 63	0000	0000	. . .	0000	. . .	1000
FUSE	ADDR	DUT 63	0000	0000	. . .	0000	. . .	1010

Fig. 5

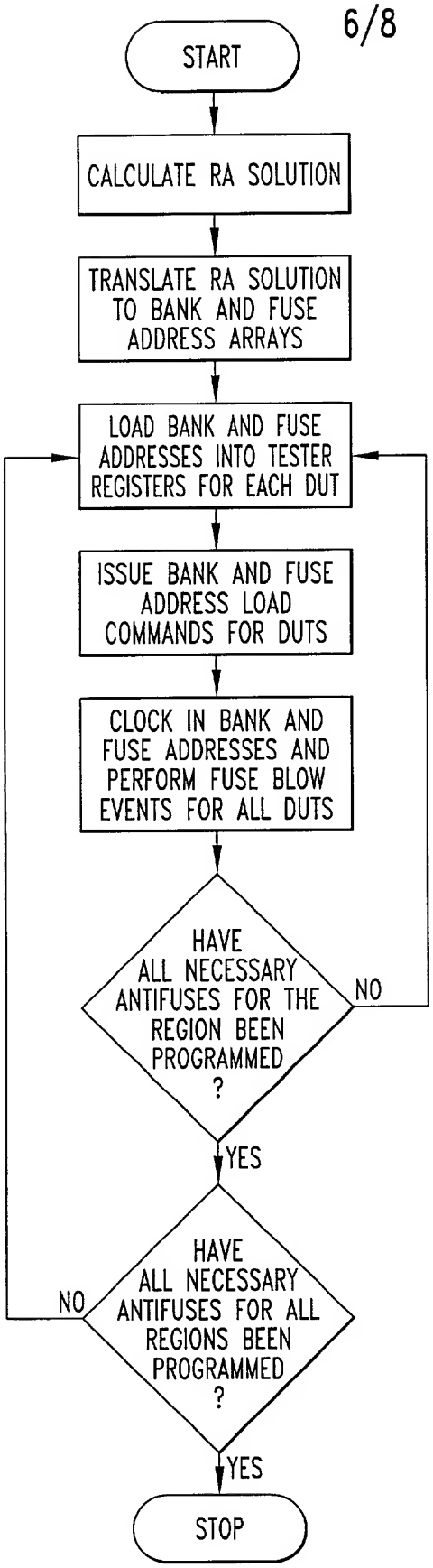
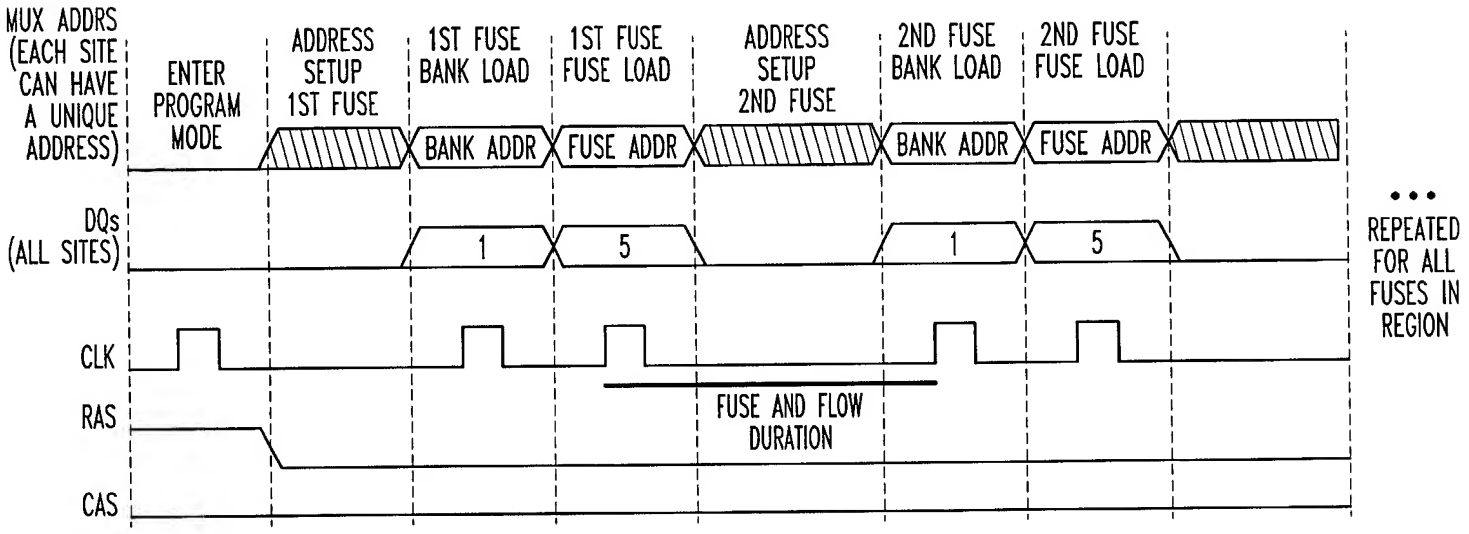

START
CALCULATE RA SOLUTION
TRANSLATE RA SOLUTION TO BANK AND FUSE ADDRESS ARRAYS
LOAD BANK AND FUSE ADDRESSES INTO TESTER REGISTERS FOR EACH DUT
ISSUE BANK AND FUSE ADDRESS LOAD COMMANDS FOR DUTS
CLOCK IN BANK AND FUSE ADDRESSES AND PERFORM FUSE BLOW EVENTS FOR ALL DUTS
HAVE ALL NECESSARY ANTIFUSES FOR THE REGION BEEN PROGRAMMED ?
NO
YES
HAVE ALL NECESSARY ANTIFUSES FOR ALL REGIONS BEEN PROGRAMMED ?
NO
YES
STOP

Fig. 6



DQs FOR BANK AND FUSE ADDRESS LOADING

3210	HEX	FUNCTION
0000	0	LOAD NOTHING
0001	1	LOAD BANK ADDRESS LEFT
0010	2	LOAD BANK ADDRESS RIGHT
0101	5	LOAD FUSE ADDRESS TOP LEFT
0110	6	LOAD FUSE ADDRESS TOP RIGHT
1001	9	LOAD FUSE ADDRESS BOTTOM LEFT
1010	A	LOAD FUSE ADDRESS BOTTOM RIGHT

Fig. 7

DEVICE LAYOUT

DEVICE BANK (FUSE REGION) 0	
DQs	
3210	
0001	LOAD BANK ADDRESS
0101	LOAD FUSE ADDRESS

DEVICE BANK (FUSE REGION) 2	
DQs	
3210	
0010	LOAD BANK ADDRESS
0110	LOAD FUSE ADDRESS

DEVICE BANK (FUSE REGION) 1	
DQs	
3210	
0001	LOAD BANK ADDRESS
1001	LOAD FUSE ADDRESS

DEVICE BANK (FUSE REGION) 3	
DQs	
3210	
0010	LOAD BANK ADDRESS
1010	LOAD FUSE ADDRESS

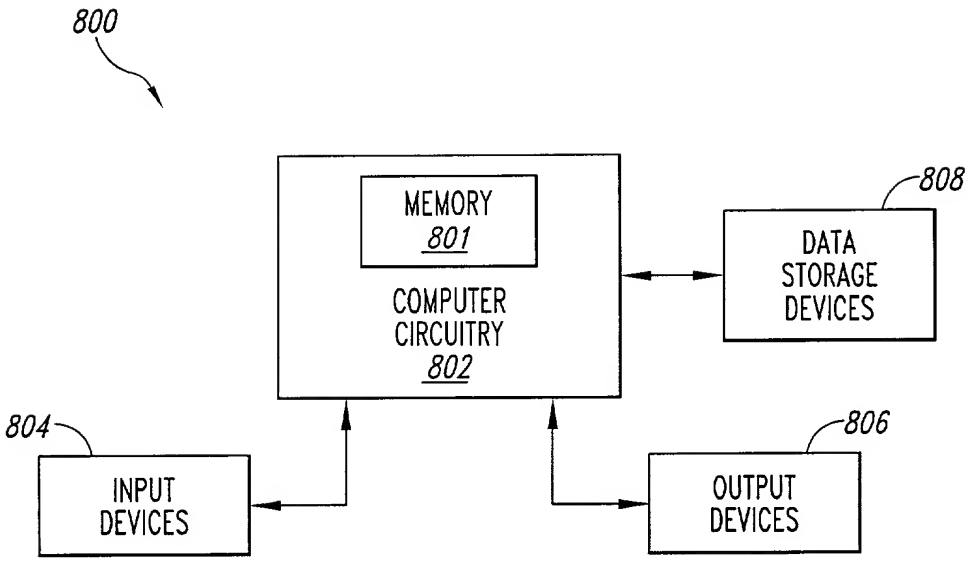

800
MEMORY
801
COMPUTER
CIRCUITRY
802
808
DATA
STORAGE
DEVICES
804
INPUT
DEVICES
806
OUTPUT
DEVICES

Fig. 8